

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	:	Javier Del Pavon, et al.
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Group Art Unit	:	2617
Examiner	:	Sharad K. Rampuria
Attorney Docket No.	:	US020430US

**APPEAL BRIEF
On Appeal from Group Art Unit 2617**

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Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed on March 4, 2009 and in response to the final Office Action of December 4, 2008.

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I. REAL PARTY IN INTEREST

The real party in interest is Koninklijke Philips Electronics N.V., the assignee of record.

II. RELATED APPEALS AND INTERFERENCES

Appellant is not aware of any pending appeals, judicial proceedings, or interferences which may be related to, directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

- a) Claims 1-9, 13-21, 26, and 27 are pending at the time of filing the appeal brief.
- b) Claims 1 and 13 are independent.
- c) Claims 1-9, 13-21, 26, and 27 stand rejected and are the subject of this appeal.
- d) Claims 10-12 and 22-25 are cancelled.

IV. STATUS OF AMENDMENTS

The claims listed in section "VIII. Claims Appendix" of this Appeal Brief correspond to the claims as submitted in Appellant's amendment filed October 24, 2008. No claim amendments have been submitted following the amendment of October 24, 2008, nor are any amendments pending.

V. SUMMARY OF CLAIMED SUBJECT MATTER

It should be explicitly noted that it is not the Appellant's intention that the currently claimed or described embodiments be limited to operation within the illustrative embodiments described below beyond what is required by the claim language. Further description of the illustrative embodiments are provided indicating portions of the claims which cover the illustrative embodiments merely for compliance with requirements of this appeal without intending to read any further interpreted limitations into the claims as presented.

The paragraph numbers referenced in the following summary of claimed subject matter relate to the specification as published (US Pub. 2006/0014492 A1, Jan. 19, 2006).

The claimed invention, as recited in claim 1, is directed to a Hybrid Controller (HC) for an IEEE 802.11 wireless data communications system supporting quality of service (QoS) enhancements [0005], comprising: a Station Management Entity (SME) within the HC [0007]; and a Media Access Control (MAC) SubLayer Management Entity (MLME) within the HC [0007] and communicably coupled both to the SME and to MLMEs for wireless stations (WSTAs) participating in the IEEE 802.11 wireless data communications system [0007], wherein responsive to a schedule change for one of the participating WSTAs, the SME within the HC generates a request primitive for transmission to the MLME within the HC [0007], and wherein the request primitive includes a Schedule Element [0007].

The claimed invention, as recited in claim 13, is directed to a method of supporting quality of service (QoS) enhancements within a Hybrid Controller (HC) for an IEEE 802.11 wireless data communications system [0005], comprising: operating a Station Management Entity (SME) within the HC [0007]; operating a Media Access Control (MAC) SubLayer Management Entity (MLME) within the HC and communicably coupled both to the SME and to

MLMEs for wireless stations (WSTAs) participating in the IEEE 802.11 wireless data communications system [0007]; and responsive to a schedule change for one of the participating WSTAs, generating a request primitive for transmission from the SME within the HC to the MLME within the HC, wherein the request primitive includes a Schedule Element [0007].

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1-9, 13-21, 26 and 27 are properly rejected under 35 U.S.C. 103(a) over Ho (US Pub. 2003/0081547, hereinafter Ho) in view of Sai et al. ("QoS Signaling for Parameterized Traffic in IEEE 802.11E Wireless LANs," by Sai Shankar et al., August 2002, pages 67-83, IDS filed on 05/06/2005, hereinafter Sai).

VII. ARGUMENT

Appellant respectfully traverses the rejections in accordance with the detailed arguments set forth below.

Claims 1-9, 13-21, 26 and 27 are not properly rejected under 35 U.S.C. 103(a) over Ho and Sai.

1. Claims 1 and 13

MPEP 2142 states:

"rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 R.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). See also *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 USPQ2d 1385, 1396 (2007) (quoting Federal Circuit statement with approval).

Appellant's claim 1 defines a hybrid controller (HC) and calls, in part, for:

"...responsive to a schedule change for one of the participating WSTAs, the SME within the HC generates a request primitive for transmission to the MLME within the HC"

Claim 13 is a method claim including limitations substantially similar to those listed above for claim 1. For the sake of brevity and because of the similarity between the limitations in claims 1 and 13, the remarks below will be limited to claim 1. These remarks will be understood to pertain equally to the remaining independent claims.

As explained in the prior response, Ho appears to introduce the concept of traffic streams and the need to add, delete, and modify the streams with the support of QoS primitives. In paragraphs [0091]-[0092], Ho even mentions that the HC schedules transmission times. But at no time does Ho even remotely evidence an appreciation of the need to accommodate scheduling changes or that scheduling changes are to be effected by primitives requesting the schedule change. Instead, Ho simply offers that the HC adds, deletes, and modifies traffic streams to

schedule the appropriate transmission times. Thus, Ho is not even aware of the possible occurrence of scheduling changes and the concomitant need to be able to handle scheduling changes, as addressed in Appellant's claims above.

Even though Ho appears to see a need to schedule transmission times in the first instance, Ho lacks any teaching or appreciation of the need for *"a request primitive relating to a schedule change for one of the participating WSTAs,"* as defined by Appellant in independent claim 1. Moreover, Ho lacks any teaching that *"the MLME within the HC determines a result for the request primitive"* relating to the schedule change and that the MLME then *"generates a confirm primitive for transmission to the SME within the HC,"* as defined by Appellant in dependent claim 7 (and corresponding method claim 19). Ho instead appears to propose that the initial scheduling of transmission times be handled by adding, deleting, and modifying the traffic streams at the HC. There is no mention of scheduling change in Ho. There are no request primitives relating to a schedule change proposed anywhere in Ho.

Sai was added to Ho because, according to the present Office Action at page 3, *"Ho doesn't teach specifically, wherein, responsive to receipt of a Schedule QoS Action frame at the WSTA, the MLME within the WSTA generates an indication primitive for transmission to the SME within the WSTA."* The Office Action then goes on to state that, *"Sai teaches in an analogous art, that wherein, responsive to receipt of a Schedule QoS Action frame at the WSTA, the MLME within the WSTA generates an indication primitive for transmission to the SME within the WSTA. (Pgs. 74-75: section 4.2)."*

Even if the combination of Sai with Ho is considered to be proper, a proposition with which Appellant neither acquiesce nor agree, the above-recited features that are cited in the present Office Action as being taught by Sai are nowhere to be found in any of the independent

claims, namely, claims 1 and 13. As a result, the present Office Action has failed to state a prima facie case of obviousness. On this basis alone, the rejection should be reversed.

In spite of the lack of a prima facie case of obviousness being made for the combination of Sai and Ho, the differences between the claims and the combined teachings of Sai and Ho will be discussed below.

Sai appears to describe QoS signaling for a wireless network according to the IEEE 802.11e standard. MAC operations for QoS appear to be discussed at least in Section 4 of the reference at pages 74 and 75. MAC signaling, in particular intra-STA signaling, between the SME and MLME is described in Section 5 of the reference at pages 75-78.

According to Sai, a traffic stream may be added via a set of MAC service access point primitives. The request primitives described by Sai are discussed immediately below. The MLME-ADDTS.request primitive is *“sent by SME to MLME to initiate a stream management frame with specified parameters. This primitive requests addition or modification of a traffic stream.”* See Sai at page 76. The MLME-WMSTATUS.request is *“sent by SME to MLME to request the MLME for the amount of channel bandwidth available, channel status and the amount in use for QoS streams.”* See Sai at page 77. The MLME-SS-BW-QUERY.request is *“sent by SME to MLME to request the source QSTA to probe for the achievable transmission rate with the destination QSTA in the same QBSS.”* Ibid. In the section dealing with Inter-STA signaling, Sai discusses adding and modifying traffic streams in a manner similar to that described by Ho. In this regard, Sai appears to be cumulative to the teachings of Ho.

From a complete review of the Sai reference, it appears that Sai lacks any description of a primitive or protocol or process for generating a request primitive including a Schedule Element in response to a schedule change of a WSTA, as defined in the independent claims. These

claimed limitations insure that a scheduling change for the WSTA is directly controlled from the request primitive by including the schedule element. Any teaching, showing or suggestion of these limitations is absent from the teachings of Sai and Ho.

Sai appears to teach adding a traffic stream, requesting a status of the medium, and determining the bandwidth for a sidestream. While Sai appears to apply primitives between SME and MLME to control the addition of streams and the probing for possible bandwidth, there is no disclosure relating to schedule changes or even responding to a request for a scheduling change for the wireless stations (WSTAs) in a network.

The Final Office Action points to Sai at pages 69-70 as teaching the claimed limitations. The cited portions of Sai is based on the premise *“that there is a need for coordination between the 802.11e MAC and higher layers so that streaming applications can request and achieve their QoS requirements.”* See Sai at page 68.

In contrast to claim 1, Sai, at page 69-70, Sai teaches a *“Resource ReSerVation Protocol (RSVP)”* as a method for scheduling resources, in which an RSVP daemon communicates with modules, returns an error notification, and sets parameters to achieve a desired QoS. A daemon is generally known as a type of program on an operating system that runs unobtrusively in the background. The RSVP daemon, as taught by the cited portions of Sai, is not the same as *“responsive to a schedule change for one of the participating WSTAs, the SME within the HC generates a request primitive for transmission to the MLME within the HC, and wherein the request primitive includes a Schedule Element,”* as recited in claim 1.

There is no teaching, showing, or suggestion in Sai or Ho to enable a person of ordinary skill in the art to develop a scheduling change process for a WSTA by using a set of primitives. Thus, it is believed that Sai and Ho do not teach or suggest the elements defined in claim 1

wherein, “*responsive to a schedule change for one of the participating WSTAs, the SME within the HC generates a request primitive for transmission to the MLME within the HC, and wherein the request primitive includes a Schedule Element.*”

The Final Office Action alleges “one skilled in the art would recognize the amalgamation of the above two references.” Appellant respectfully disagrees.

It should be noticed that the first author of Sai is, in fact, a co-inventor of the present invention. It can be attested to by the inventors that they have been involved in developing efficient protocols for the IEEE 802.11, and that the Sai reference reflects the status of their work as of mid-2002. It is the progress made in the second half of 2002 that resulted in the development of the present invention. While Sai does mention a scheduling entity (SE) on page 76 of the reference, Sai is silent as to the provisioning and operation of that scheduling entity. Thus, it can only be in hindsight using the disclosure in the present application that one can reasonably read the Sai reference and conclude that the claimed limitations involving scheduling changes are even remotely hinted at in the Sai reference. Such hindsight is improper in trying to establish a case of obviousness.

In light of the remarks above, it is believed that Ho and Sai fail to teach all the elements in Appellant’s amended claims. In view of these remarks and in light of the substantial similarity between the limitations in independent claims 1 and 13, it is believed that the elements of claims 1 and 13 and the claims dependent thereon would not have been obvious to a person of ordinary skill in the art upon a reading of Ho and Sai, either separately or in combination.

2. Claims 2-9, 14-21, 26 and 27

In each of these rejections, the Office Action addresses only the additional limitations introduced in the dependent claims, and apparently relies upon the combination of Ho and Sai for

teaching the elements of the respective base claims 1 and 13 upon which each of these rejected claims depend.

As noted above, the combination of Ho and Sai fail to teach each and every feature recited in the base claims and since the additional cited references fail to cure this deficiency of Ho and Sai, appellant respectfully submits that the rejections under 35 U.S.C. 103(a) that rely upon Ho and Sai for this teaching are unfounded, per MPEP 2142 and should be reversed by the Board.

Conclusion

In light of the above, appellant respectfully submits that the rejection of claims 1-9, 13-21, 26, and 27 is in error, legally and factually, and must be reversed.

Respectfully submitted,

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VIII. CLAIMS APPENDIX

1. **(Previously Presented)** A Hybrid Controller (HC) for an IEEE 802.11 wireless data communications system supporting quality of service (QoS) enhancements, comprising:

a Station Management Entity (SME) within the HC; and

a Media Access Control (MAC) SubLayer Management Entity (MLME) within the HC and communicably coupled both to the SME and to MLMEs for wireless stations (WSTAs) participating in the IEEE 802.11 wireless data communications system,

wherein responsive to a schedule change for one of the participating WSTAs, the SME within the HC generates a request primitive for transmission to the MLME within the HC, and wherein the request primitive includes a Schedule Element.

2. **(Previously Presented)** The HC according to claim 1, wherein the request primitive includes an address for the one of the participating WSTAs.

3. **(Previously Presented)** The HC according to claim 1, wherein the SME transmits the request primitive to the MLME within the HC.

4. **(Previously Presented)** The HC according to claim 3, wherein, responsive to receiving the request primitive from the SME, the MLME formulates a Schedule QoS Action frame including the Schedule Element and transmits the formulated Schedule QoS Action frame

5. **(Previously Presented)** A wireless data communications system including the HC according to claim 1, the wireless data communications system further comprising:

a MLME within the one of the participating WSTAs,

wherein the MLME within the one of the participating WSTAs, responsive to receipt of the Schedule QoS Action frame by the one of the participating WSTAs, generates an indication primitive for transmission to an SME within the one of the participating WSTAs.

6. **(Previously Presented)** The wireless data communications system according to claim 5, wherein the indication primitive includes the Schedule Element.

7. **(Previously Presented)** The Hybrid Controller (HC) as defined in claim 1,

wherein, responsive to a request primitive relating to a schedule change for one of the participating WSTAs, the MLME within the HC determines a result for the request primitive and generates a confirm primitive for transmission to the SME within the HC.

8. **(Original)** The HC according to claim 7, wherein the confirm primitive includes a result code corresponding to the result for the request primitive.

9. **(Previously Presented)** The HC according to claim 8, wherein the MLME within the HC transmits the confirm primitive to the SME within the HC.

10-12. **(Cancelled)**.

13. **(Previously Presented)** A method of supporting quality of service (QoS) enhancements within a Hybrid Controller (HC) for an IEEE 802.11 wireless data communications system, comprising:

operating a Station Management Entity (SME) within the HC;

operating a Media Access Control (MAC) SubLayer Management Entity (MLME) within the HC and communicably coupled both to the SME and to MLMEs for wireless stations (WSTAs) participating in the IEEE 802.11 wireless data communications system; and

responsive to a schedule change for one of the participating WSTAs, generating a request primitive for transmission from the SME within the HC to the MLME within the HC, wherein the request primitive includes a Schedule Element.

14. **(Previously Presented)** The method according to claim 13, wherein the request primitive includes an address for the one of the participating WSTAs.

15. **(Previously Presented)** The method according to claim 14, further comprising:

transmitting the request primitive from the SME to the MLME within the HC.

16. **(Previously Presented)** The method according to claim 15, further comprising:

responsive to receiving the request primitive from the SME, formulating a Schedule QoS Action frame including the Schedule Element; and

transmitting the formulated Schedule QoS Action frame.

17. **(Previously Presented)** The method according to claim 16, further comprising:

responsive to receipt of the Schedule QoS Action frame by the one of the participating WSTAs, generating an indication primitive for transmission to an SME within the one of the participating WSTAs.

18. **(Previously Presented)** The method according to claim 17, wherein the indication primitive includes the Schedule Element.

19. **(Previously Presented)** The method as defined in claim 13, the method further comprising:

responsive to a request primitive relating to a schedule change for one of the participating WSTAs, determining a result for the request primitive and generating a confirm primitive for transmission from the MLME within the HC to the SME within the HC.

20. **(Previously Presented)** The method according to claim 19, wherein the confirm primitive includes a result code corresponding to the result for the request primitive.

21. **(Previously Presented)** The method according to claim 20, further comprising:

transmitting the confirm primitive from the MLME within the HC to the SME within the HC.

22-25. **(Cancelled)**.

26. **(Previously Presented)** The system according to claim 5 wherein the indication primitive includes a Schedule Element from the Schedule QoS Action frame.

27. **(Previously Presented)** The system according to claim 26, wherein the MLME within the WSTA transmits the indication primitive to the SME within the WSTA.

IX. EVIDENCE APPENDIX

No evidence has been submitted pursuant to §§ 1.130, 1.131, or 1.132 of this title nor any other evidence entered by the examiner and relied upon by appellant in the appeal.

X. RELATED PROCEEDINGS APPENDIX

Appellant is not aware of any appeals or interferences related to the present application.